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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/664,353	09/17/2003	Yukimasa Yamamoto	9281-4651	4136
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Brinks Hofer Gilson & Lione P.O. Box 10395 Chicago, IL 60610			EXAMINER LEVI, DAMEON E	
			ART UNIT 2841	PAPER NUMBER

DATE MAILED: 12/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/664,353

Applicant(s)

YAMAMOTO, YUKIMASA

Examiner

Dameon E Levi

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,3-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakai US Patent 5966052 in view of Hata et al US Patent 6383835.

Regarding claim 1, Sakai discloses a surface-mounting type electronic circuit unit comprising:

a side electrode arranged on a side face; a circuit substrate having a wiring pattern arranged on an upper face connected the side electrode (for example, see elements 2,2a,G2,G4,Figs 1-3, see columns 2-5)

and

an electric part connected to said wiring pattern by soldering, wherein said wiring pattern has a connecting conductor electrically connecting said side electrode and said electric part, (for example, see elements BC1,BC2,3,Figs 1-3, see columns 2-5)

Sakai does not expressly disclose the connecting conductor contains multiple bends between the electronic part and the side electrode.

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Hata et al discloses a device wherein a connecting conductor contains multiple bends between an electronic part and a side electrode (for example, see elements 2b, 2d, Figs 7A-24).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have formed multiple bends in the connecting conductor as taught by Hata et al in the device as taught by Sakai for the purpose of making the length of the connecting conductor longer in order to improve the durability of the device package(see Hata et al, column 8, lines 15-25)

Regarding claim 3, Sakai discloses a surface-mounting type electronic circuit unit comprising:

a side electrode arranged on a side face; a circuit substrate having a wiring pattern arranged on an upper face connected to the side electrode (for example, see elements 2,2a,G2,G4,Figs 1-3, see columns 2-5)

and

an electric part connected to said wiring pattern by soldering, wherein said wiring pattern has a connecting conductor electrically connecting said side electrode and said electric part, (for example, see elements BC1,BC2,3,Figs 1-3, see columns 2-5)

Sakai does not disclose a layer fabricated by silk screen printing is formed on said connecting conductor between said electric part and said side electrode so as to cross the connecting conductor.

Hata et al discloses embodiments wherein disclose a layer fabricated by silk screen

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printing is formed on said connecting conductor (for example, see elements 3 , Figs 7A-24) Moreover, the limitation [**a layer fabricated by silk screen printing**] is a process limitation in a product claim and cannot serve to patentably define the product over the prior art of record []; [see Product –by-process, MPEP 2113 and 2173.05(p)]

It is well settled that the presence of process limitations in product claims, which product does not otherwise distinguish over the prior art , cannot impart patentability to that product.(In re Johnson, 157 USPQ 670, 1968).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have formed a layer as taught by Hata et al in the device as taught by Sakai for the purpose of protecting the conducting connector and increasing the reliability of the connections.

Regarding claim 4, Sakai discloses wherein said connecting conductor is formed in a straight line shape. (for example, see elements 3,Figs 1-3, see columns 2-5)

Regarding claim 5, Sakai discloses wherein said connecting conductor is formed in a bent state (for example, see elements 3,Figs 1-3, see columns 2-5).

Regarding claim 6, Sakai discloses wherein said connecting conductor is formed in the bent state of a zigzag shape (for example, see elements 3,Figs 1-3, see columns 2-5).

Regarding claim 7, Sakai discloses wherein said connecting conductor has a length sufficient to avoid melting the solder attaching the electric part when the side electrode is soldered to an electrically conductive pattern of a mother substrate(for example, see elements BC1,BC2,3,Figs 1-3, see columns 2-5).

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Regarding claim 8, Sakai discloses the instant claimed invention except wherein said connecting conductor has a U-shaped bend.

Hata et al discloses , wherein a connecting conductor has a U-shaped bend (for example, see elements 2d, Fig 7A-23).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have made a U shaped bend as taught by Hata et al in the device as taught by Sakai for the purpose of making the length of the connecting conductor longer in order to improve the durability of the device package(see Hata et al, column 8, lines 15-25)

Regarding claim 9, Sakai discloses the instant claimed invention except wherein said connecting conductor has a V-shaped bend.

Hata et al discloses , wherein a connecting conductor has a U-shaped bend (for example, see elements 2d, Fig 7A-23).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have made a V shaped bend as taught by Hata et al in the device as taught by Sakai for the purpose of making the length of the connecting conductor longer in order to improve the durability of the device package(see Hata et al, column 8, lines 15-25)

Regarding claim 10, Sakai discloses the instant claimed invention except wherein said connecting conductor has a total bend of at least 180.

Hata et al discloses , wherein a connecting conductor has a total bend of at least 180 (for example, see elements 2d, Fig 7A-23).

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Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have made a 180 bend as taught by Hata et al in the device as taught by Sakai for the purpose of making the length of the connecting conductor longer in order to improve the durability of the device package(see Hata et al, column 8, lines 15-25)

Regarding claim 11, Sakai discloses wherein said connecting conductor has a length sufficient to avoid melting the solder attaching the electric part when the side electrode is soldered to an electrically conductive pattern of a mother substrate (for example, see elements BC1,BC2,3,Figs 1-3, see columns 2-5).

Regarding claim 12, Sakai discloses the instant claimed invention except wherein said connecting conductor has a U-shaped bend.

Hata et al discloses , wherein a connecting conductor has a U-shaped bend (for example, see elements 2d, Fig 7A-23).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have made a U shaped bend as taught by Hata et al in the device as taught by Sakai for the purpose of making the length of the connecting conductor longer in order to improve the durability of the device package(see Hata et al, column 8, lines 15-25)

Regarding claim 13, Sakai discloses the instant claimed invention except wherein said connecting conductor has a V-shaped bend.

Hata et al discloses , wherein a connecting conductor has a U-shaped bend (for example, see elements 2d, Fig 7A-23).

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Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have made a V shaped bend as taught by Hata et al in the device as taught by Sakai for the purpose of making the length of the connecting conductor longer in order to improve the durability of the device package(see Hata et al, column 8, lines 15-25)

Regarding claim 14, Sakai discloses the instant claimed invention except wherein said connecting conductor has a total bend of at least 180.

Hata et al discloses , wherein a connecting conductor has a total bend of at least 180 (for example, see elements 2d, Fig 7A-23).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have made a 180 bend as taught by Hata et al in the device as taught by Sakai for the purpose of making the length of the connecting conductor longer in order to improve the durability of the device package(see Hata et al, column 8, lines 15-25)

Regarding claims 15-20, the methods disclosed therein are deemed as inherent and obvious for the same reasons stated above in the assembly of the claimed device of the preceding claims as fully met by the accompanying references, (Sakai, Hata et al) and are subsequently rejected.

Response to Arguments

Applicant's arguments with respect to claims 1,3-20 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dameon E Levi whose telephone number is (571) 272-2105. The examiner can normally be reached on Mon.-Fri. (9:00 - 5:00).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo can be reached on (571) 272-1957. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dameon E Levi
Examiner
Art Unit 2841

DEL



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